IMAGE

JOURNAL OF PHOTOGRAPHY AND MOTION PICTURES
OF THE GEORGE EASTMAN HOUSE

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IMAGE IS FIVE YEARS OLD

This issue of Image *marks the fifth year of publication and its first year in a new and enlarged format. And the enthusiasm of its subscribers encourages us to think that* Image *has progressed.*

We are happy to take this opportunity to extend our thanks and our appreciation for the loyal support of the photographic and historical enthusiasts, many of whom have been with Image *from the start. And we heartily welcome the new and ever growing number of enthusiasts that are joining every day as Associates of George Eastman House.*

George Eastman House and its Journal of Photography and Motion Pictures, Image, *represents and serves all photography. The museum is a free, public, independent, educational institution. And its mission is to further the knowledge of photography's means, accomplishments, personalities and potentialities from its earliest beginnings to its latest developments.*

The museum's mission is to exhibit and to demonstrate. But much of the story of photography can be told only in words; hence the publication of Image *to reach George Eastman House Associates who live far beyond the community.*

EDITORIAL

We feel that photography is, perhaps, man's supreme achievement in his efforts to develop a fluent device to transmit ideas. We feel that no other medium of communication relates ideas, recreates events, permanently records images of life as well. Already in a single century it has recorded and clarified so that the world of tomorrow can learn from the world of today. Photography has become the indispensable partner of medicine, science, industry, education as well as art and entertainment. The motion picture is a vehicle so new for recording fact and communicating fiction that we are still startled at its universal effect on our modern life. We feel that photography, with its motion and its still pictures, has become the recording angel of our times.

Photography, this new and facile medium of communication, has come of age. It is well in its second century. It has a fascinating history. It has a proud tradition. This history and this tradition Image *hopes to report, and hopes to report it often in the light of what is new and original.*

Image *addresses itself to the world in general and the photographic profession in particular on the subject of how photography, over the decades, has served human progress—and how it is doing so now.*

OSCAR N. SOLBERT

"G.W.W."

G. W. W. is the identifying mark on about four hundred prints and two hundred stereographs in the George Eastman House collections, and it stands for a photographer of Queen Victoria's time, George Washington Wilson.

by Gerda Peterich

"Mr. Wilson's name, even in America, is a household word, among photographers."[1] Readers might well find some of his prints in their family homes, for Mr. Wilson was a very prolific producer of views for tourists and armchair travelers. His "Catalogue of Imperial, Cabinet, Stereoscopic, and Carte-de-Visite Views," published in 1877, shows that he kept over 1700 different views in stock at all times.

George Washington Wilson of Aberdeen (1823-1893) was a photographer of the wet-plate and stereograph period. His rich brown-tone albumen prints range from a warm to a cool hue with a yellow or pink cast in the highlights. They are on very thin paper. Their quality is persistently fine, their state of preservation excellent. The subject matter: Scottish and English scenes: cities, castles and cathedrals; sea, lakes and mountains. Today Mr. Wilson would be classified as a "commercial" photographer, but at his time the split between commercial and "art" photography was not yet felt and a photographer who mastered his craft comfortably enjoyed his reputation.

After receiving some art training, Wilson became a portrait painter, but soon took up photography. Although highly skilled in the technique of photography and the author of *A Practical Guide to the Collodion Process in Photography* (London: Longman & Co., 1855), he was highly esteemed as an artist and was himself aware of the need of an artistic point of view. ". . . It is evident," we read in the *Art Journal* for September 1, 1866, "that he has not been stimulated solely, or even chiefly, by commercial enterprise. . . . he has evidently thought and studied as well as worked; given careful attention to atmospheric effects; taken one point of view in one light and the next in another, so as to give to the scenery much of the varied effects it derives from nature." Another critic writes: "Mr. Wilson's views, in all respect, prove that he is an artist. In point of selection he is exceedingly careful and particular; he studies the lighting of the landscape, he intends to photograph, as a portrait operator studies the lighting of the sitter's face, and if the light does not suit him, he will wait until it is favorable."[2]

Wilson is not given to many words, but in his guide he tells the student that "it is in choosing the best or most picturesque portion of a landscape, that a manipulator who has a knowledge of art, is superior to the mere mechanic . . . ." And he advises: "Painters find it better that their whole energies should be spent in designing their pictures . . . than that they should waste their time in preparing and grinding their pigments . . . . So should it be in photography, where the most expert manipulator finds himself taxed to the utmost to obtain perfect results, with every requisite prepared to his hand." And again, in the *British Journal of Photography:* "I trouble myself very little with the chemistry of photography, and so long as I can get weather to suit me, and subjects to *compose* as I should like them, I am generally satisfied with the rule-of-thumb principle in the chemical department."[3]

If Wilson stated that he was satisfied with the rule-of-thumb principle, he was still in reality a brilliant technician. He did not, like many of his contemporaries, experiment with new processes, but had a mastery of the wet-plate that was not easily matched by any photographer. Judging exposure without any guide other than experience, and adjusting it to the slow wet-plate process, was the major technical problem. "If the aperture . . . be half an inch in diameter, and the focal length of the lens about 16 inches," he explains in his manual in 1855, "the time of exposure of the plate will vary from five seconds to fifteen seconds." But by the early sixties he had learned to give exposures so short as to be called "instantaneous."

Wilson's "instantaneous views" made his reputation and maintained his name. Instantaneous, of course, at the time of the wet-plate did not mean the same as today; "any space of

LOCH OF PARK, ABERDEENSHIRE. No. 289.
". . . . and above all, the exquisite natural clouds render these pictures perfect gems."

time less than a second"[4] would apply. To Wilson it meant "quick": 1/6th of a second was as fast as he could uncap a lens and cover it again with his hat. Instantaneous was also associated with different subject matter than today: views with clouds and waves, boats under sail, harbor scenes and peopled streets, the latter mostly taken from a high vantage point. These are subjects that today would be called slow.

Wet-plate exposures appear long to us, yet it took ingenuity to master them. There were no automatic shutters, Wilson used a loosely fitting double cap of cardboard for his stereo camera which he lifted and replaced quickly. He chose the months of May and June for his instantaneous views, when the "actinism of the sun's light" is the most intense. Having to work with a relatively wide open diaphragm, he focused on the middle distance, "leaving the near and more distant objects to take care of themselves."

For his instantaneous plates, Wilson always mixed a fresh sensitizing bath, although he preferred the "clearer" pictures that a used solution would give him. He did not employ "accelerating agencies," such as bromine, as was the practice with many photographers. Of the two developers in use at the time he chose the acidulated protosulphate of iron (the other being pyrogallic acid). Develop "until all details are fully out [in yellow light] or as long as it appears to act without fogging." Wash plate, drop some thirty-grain nitrate of silver solution from dropping bottle on surface. When fully covered, "dash on some fresh developer." Wash off and fix plate. If the negative is still weak, "redevelop" with "silver and iron."—This, of course, amounts to a technique of intensifying an image "so faint, so filmy, so transparent as to be little more than a phantom."[5]

Although contemporary accounts usually speak of his instantaneous stereo views, we find 8 x 5-inch "cabinets" and even 10 x 7-inch "imperials" bustling with action. While many of his street scenes are taken from a high vantage point, making people and carriages appear to move moderately fast, some startle with their lively action taken from a close point of view. Yet, there is no record of more highly sensitive plates used for these. Did experience give him a bolder concept of the capabilities of his medi-

um; did it make him more daring?

G.W.W., as his prints are signed, was a careful worker. In his three printing establishments (in 1880 Wilson was the world's largest publisher of photographic views) prints were thoroughly washed in revolving frames driven by water. They were dried on a hot glazing machine to a pleasant lustre which they still maintain. If today some of them show signs of deterioration, it has been caused by the mounting cement. Wilson chose albumen paper, which he toned with gold chloride, because, as he said in his *Practical Guide*, "pictures printed on albumenized paper have generally greater clearness and depth in the shadows, and more detail than those on simple salted paper. Many prefer the latter, on account of its peculiar softness of effect. . . ."

Before the time of the amateur snapshot, thousands of people bought photographic views from professional photographers. Among his clients Wilson counted Queen Victoria, from whom he had a standing order "to furnish her with copies of all the views which he may take."

BIBLIOGRAPHY

1. *The Photographer's Friend,* II (1872), 48-50
2. Ibid.
3. *British Journal of Photography,* XI (1864), 354
4. *The Photographic News,* III (1860), 126
5. Ibid., IV (1860), 359

The quotations by Wilson on pages 224-228 are from the *Br. Jour. Phot.* (1864). *A Voice from the Hills: Mr. Wilson at Home.*

FALLS OF TUMMEL. No. 476.
"The peculiar feature of the print is the rising mist . . . This was taken instantaneously, and the light, fleecy, appearance of the mist is admirable."

SIR WALTER SCOTT'S MONUMENT.

SIR WALTER SCOTT'S MONUMENT, on Princes St. in Edinburgh. First published in 1868.

My aim being to secure some fleeting effect, which could only be caught if caught quickly: the effect of a street when crowded with traffic. These effects can be caught by anyone, without peculiarly sensitive or secret preparations of collodion and nitrate bath, and without any super-excellent lenses; but considerable watching and waiting is necessary be-for an effect turns up which is both capable *and* worthy *of being taken, and, when it does turn up, one must be ready to do it at* once, *as presto! it is too late.*

BANK OF ENGLAND, LONDON. No. 7413.

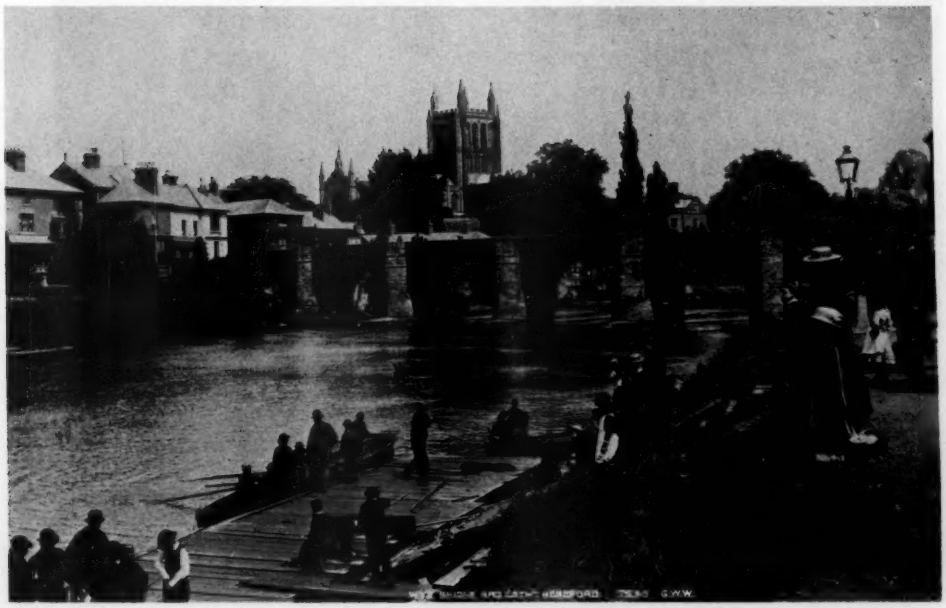
DURHAM CASTLE AND CATHEDRAL

COURTYARD, DOUNE CASTLE.

I have to study the popular taste as well as my own, and must get a pleasing picture that can be recognized by the public; and the public is not much given to scrambling to out-of-the-way places where a superb view may be had of a celebrated spot, if it can see it tolerably *well from the Queen's highway.*

The only principle which guides me in selecting my point of view is that I am never satisfied unless I can get the objects to compose *in such a manner that the eye, in looking at it, shall be led insensibly around the picture, and at last find rest upon the most interesting spot, without having any desire to know what the neighboring scenery looks like.*

WYE BRIDGE AND CATHEDRAL AT HEREFORD. No. 7530.



To the art historian photographs are indispensable documents which he can study in detail long after he has visited famous buildings or traveled miles to see great paintings and sculpture. More importantly, they enable him to compare one work of art with another. The architectural historian needs photographs which will fully reveal structural details without destroying the esthetic content. The photographs of George Washington Wilson are almost ideal for this purpose.

What a wealth of information is given in the photograph on the opposite page! Lichfield Cathedral was built in the late 12th and early 13th centuries, and is one of the finest examples of the Early English style of Gothic architecture. Structurally, the vaulting system, with its fine network of ribs, is most characteristic; this is shown with such clarity in Wilson's original photograph that every member can be studied. Esthetically, the central column seems almost an organic form, growing upward, and this upward thrust is repeated in the blind arches along the wall, the windows, and the doors. Wilson must have used a wide-angle lens to bring out these qualities. His exposure is a perfect balance between deep shadows and the glaring light which comes through the leaded window. The success of this photograph lies, however, not in its brilliant technique, but in the sense of lighting and proportion so characteristic of Wilson's work.

There are so many places which I am told I ought to visit, and so many beautiful scenes in this beautiful country of ours, that I have often difficulties in deciding whether I ought to go to the seaside in search of clouds and shipping, to the English cathedrals for picturesque interiors, or to the mountains and lochs for rocks and foliage and calm water.

PILLAR IN LICHFIELD CATHEDRAL. No. 4490.

Gerda Peterich "G.W.W."

The Mystery of Molteni's Choreutoscope

by James Card

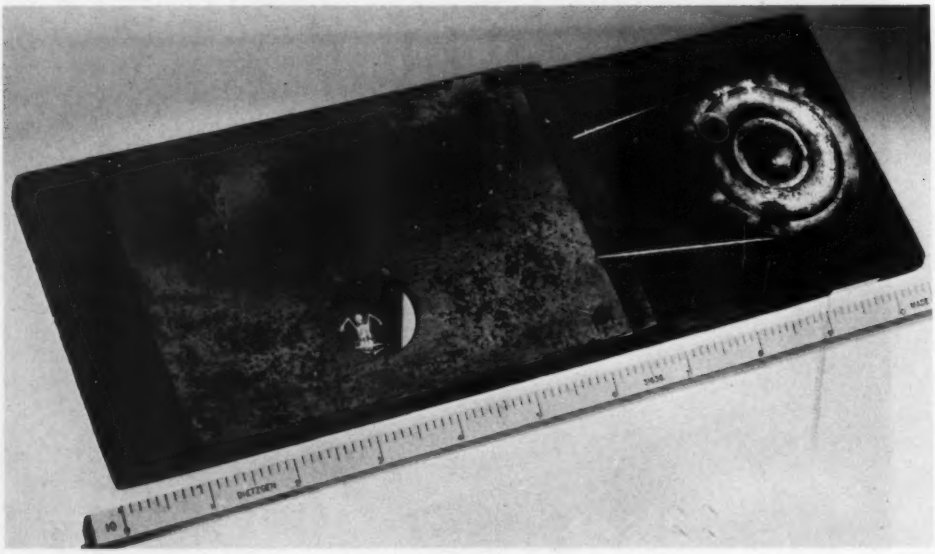
THE RECENT ACQUISITION BY EASTMAN HOUSE of a Molteni Choreutoscope, fascinating precursor of the motion picture projector, once more points up the vast confusion surrounding the origins of so comparatively recent a medium.

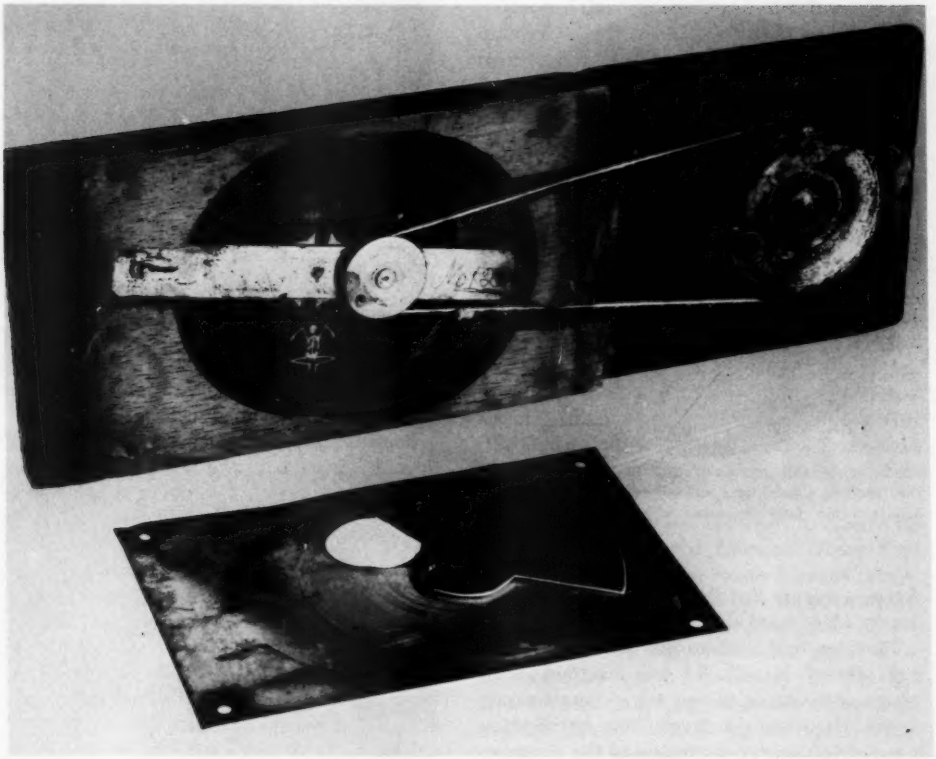
This early apparatus made it possible to project moving images in a standard magic lantern. It is of utmost importance in the history of motion pictures in that its construction embodies a Maltese Cross type of intermittent movement and a shutter geared to cut off the light source at the instant one image is being replaced by the next.

The device illustrated is that of Molteni, the French constructor of magic lanterns and innumerable trick attachments to simulate movement in projection. Martin Quigley, Jr. in his *Magic Shadows* attributes to Molteni the invention of the "Choreutoscope Tournant" and dates it 1865.

But writing in 1893, H. Fourtier in his *Les Tableaux de Projections Mouvementés,* states that the origin of the Choreutoscope was British. Since Fourtier collaborated with Molteni himself in his writing, it is doubtful that he would have been unfamiliar with the origin of the device had Molteni actually been its inventor. In discussing the projection of movement, Fourtier sums up the problem in such a way that should have made future inventors of motion picture apparatus much more clever about their work than they were: "We have attempted to indicate, in the preceding pages, the various methods of construction employed for achieving the reconstitution of movement: these different devices have been successively applied to the projecting lantern; but in this case the problem is more complex; it is necessary, before all else, to avoid the loss of illumination; the images must form themselves on the screen during an observable length of time, substituting one for the other exactly without the spectator being able to perceive the transitional movement necessary for them to be changed. Finally, the images of each one of the phases must be separated by the

The Molteni Choreutoscope. The slide proper is of wood, a metal plate covers the mechanism. The wheel at the right permitted hand operation. The white segment in the circle around the skeleton is part of the shutter.





Covering plate removed and shutter (cardboard) laid on it. In operation the shutter is attached to the small drive wheel with a pin. An arm on far side (not visible) of the drive wheel connects with the "Maltese Cross" type gear, two teeth of which appear over skeleton. This gives the stop and go movement to the metal disc with the skeletons.

more or less prolonged shutting off of the illuminating light, an eclipse during which the images may be changed.

We shall see that these diverse conditions have been most perfectly satisfied in an *English apparatus called the choreutoscope*. The choreutoscope, the barbaric name of which comes from the Greek and signifies "that which shows dances," was invented, or at least constructed in England by Hughe." (sic.)

Fourtier then describes a "choreutoscope tournant qui est particulierement construit par M. Molteni." Both the description and an illustration furnished by Fourtier are identical to the apparatus in the possession of Eastman House.

But the British inventor to whom Fourtier attributes the device must have been W. C. Hughes. And Hughes did not patent the Choreutoscope until 1884 – four years after Muybridge had already projected photographically-obtained images in his own zoopraxiscope.

The matter is further confused by the account of Henry Hopwood in *Living Pictures*, 1899. Hopwood attributes the "Rotary Choreutoscope" to "Mr. Beale of Greenwich." He describes Beale's "Dancing Skeleton" as follows:

"A disc was used, rotating in front of a lantern condenser; but this disc, instead of being formed of glass, was of thin sheet metal, the figures of a skeleton in various attitudes being cut out, stencil fashion, round the margin." The Beale device, similar though it was to Molteni's (which also used a thin metal disc rather than glass to support the images) did not use the Maltese Cross intermittent. Unfortunately for the solution of the Choreutoscope's mysterious origin, it

The "Maltese Cross" type intermittent shows clearly. The disk is of thin metal silhouetted with figures.

does not appear that Beale patented his device nor does Hopwood attempt to date it.

Here the trail leads to the United States. In 1869 Patent No. 93,594 was awarded to an American inventor, Brown, for a choreutoscope device. Hopwood points out "This specification is mainly of interest by reason of the construction employed in the intermittent mechanism. It forms a very close approach indeed to the modern cinematograph with Maltese Cross motion; a star-wheel and pin being used to drive the design wheel periodically, while a two-sector shutter is shown geared to eclipse the light during the change of picture."

In 1925, Michael Coissac published his *Histoire du Cinematographe,* a work which goes to extreme lengths to give all possible credit to French originators of motion picture devices. He, too, describes the Molteni apparatus but claims only that the French inventor "perfected the choreutoscope."

Unless it can be established that Molteni did in fact invent the Choreutoscope in 1865 as Quigley has indicated, it would appear that priority in this significant device belongs to Brown of the United States with his 1869 patent. It is a point that should be cleared up for the Choreutoscope with its Maltese Cross intermittent is the direct ancestor of the first successful motion picture projectors which did not appear until many years later.

Frank Borzage

by George Pratt

JUST RECENTLY THE GIFT OF A PERSONAL PRINT of the film *Seventh Heaven* (1927) from its director Frank Borzage to the archives of the George Eastman House has restored to view one of the most resoundingly popular successes of the silent period. It has also brought to the collection an example of the work of this skillful director not hitherto represented at all.

Seventh Heaven was a history-maker in its time. It scooped up the first of the Academy Awards for direction, for writing and for an actress' performance (Janet Gaynor). This was the first time Miss Gaynor and her co-star Charles Farrell, both young players with short screen experience at the time, attained a deft certainty in the sort of sincere and trusting characterizations that were to serve them well for the balance of their screen careers. It sent huge audiences home from theatres everywhere in a state of tearful adoration.

Seen today, *Seventh Heaven* does not betray this affectionate memory. The remembered tenderness and intimacy are still there, thanks to Frank Borzage's direction.

Borzage, like so many others, had come to the films from the legitimate stage, in the early days. He started out as an actor in Thomas Ince's film domain on the California coast in 1913. Frank wanted to play "heavies" as he had used to on the stage, but Ince insisted he be the romantic hero. Borzage later decided it was because Ince must have seen in the new actor's face a more youthful version of his own. There must have been a curious satisfaction for the big producer in watching his approximate image cast in such favorable roles.

But back in 1915, apparently when Ince's back was turned, someone cast Borzage as William S. Hart's villain in two short films.

Most of his films at that time were two-reelers, with an occasional chance at a feature-length vehicle. He made eight films with the Japanese actor Sessue Hayakawa, including *The Wrath of the Gods* and *The Typhoon* (both 1914); a print of the latter has also been added recently

At the "George" presentations at Rochester, New York, 1955. Lillian Gish and the Director of George Eastman House to the left of Frank Borzage.

Janet Gaynor and Charles Farrell in **Seventh Heaven,** 1927.

to the Eastman House collection. Borzage, the actor, can be seen in this, and he gives a vigorous, broad-scale performance as the Frenchman bereft of his love (Gladys Brockwell).

Perhaps he and Miss Brockwell reminisced later – when he was beside the camera on the *Seventh Heaven* set, and she was before it in the role of the brutal sister who takes the whip to Miss Gaynor.

After Borzage left Ince, he eventually took the step from actor to director, and finally directed the heart-warming *Humoresque* (1920) which carried his name beyond the trade to the thronging public that attended motion pictures. *Secrets* (1924), with Norma Talmadge, gave further proof of his aptitude with dramas of sentiment, and *Seventh Heaven* clinched the matter.

Never a director of limited gifts, Borzage has directed a fine range of films going all the way from the musical *Shipmates Forever* with Dick Powell and Ruby Keeler to *Desire* with the drowsy Marlene Dietrich. Yet the unpretentious story with earnest people involved was really his forte.

You knew you had a winner when you saw such a combination of Borzage and any of the following: Will Rogers *(They Had To See Paris, Young As You Feel),* Spencer Tracy *(Young America, A Man's Castle),* Helen Hayes and Gary Cooper *(A Farewell To Arms),* Jean Arthur and Charles Boyer *(History Is Made At Night),* or the candid Margaret Sullavan *(Little Man What Now?, Three Comrades, The Mortal Storm).* And it was for his direction of *Bad Girl* (1931) with its coupling of Sally Eilers and James Dunn that the Academy decorated Borzage again.

A guest in Rochester last year, to receive his "George" award at the Eastman House First Festival of Film Artists, Frank Borzage proved to be a man of easy presence, frank-faced, informal and humorous. It was not hard to imagine the gusto with which he would have directed the comic interludes in *Seventh Heaven,* especially that sequence where those ricketty French taxicabs loaded with soldiers stream to the Front near Paris and seem to turn Victory's tide to the Allies.

Nor was it hard to imagine how easy it would be for an actor to perform for such a man whose manner encourages only truth, and the honest ways of the heart.

Frank Borzage, left, shouts at Sessue Hayakawa in the trial for murder scene in **The Typhoon,** 1914.

Photographic Words

Beaumont Newhall

PHOTOGRAPHY CAME INTO BEING before the word itself was coined. Nicéphore Niépce called his pictures "heliographs," sun pictures. His less modest partner, Louis Jacques Mandé Daguerre, named his perfection of Niépce's process "Daguerréotype." William Henry Fox Talbot took refuge in the phrase "photogenic drawing" to describe his work.

Sir John F. W. Herschel appears to have been the first to advocate (if he did not indeed coin) the word "photography." In a letter to Talbot dated Feb. 23, 1839 about the use of hyposulphite of soda* for dissolving the unwanted light-sensitive silver salts after the image had been produced, he referred to the process as "photographic," and then took occasion to point out to Talbot the advantage of this new word over "photogenic." It could, Herschel wrote, be inflected. Thus came the nouns "photograph," "photography," "photographer;" the verb "to photograph;" and the adjectives "photographic," and "photographically."

Herschel's word was adopted by every Western language. It is as universal as photography itself. Over the decades a few writers held out for synonyms: Marcus A. Root, author of the oldest history of photography published in America (*The Camera and the Pencil*, Philadelphia, 1864) preferred "heliograph," on the reasoning that the actinic light of sun's rays produced the picture. A British editor, H. Snowden Ward, urged that the word "photograph" be abandoned in favor of the one he adopted in 1894 for the title of his magazine, "The Photogram." The word had been used previously; in 1859 a book appeared with the title *Photograms of an Eastern Tour*. Ward based his argument for its use on the following analogy: if "telegraph" is to write at a distance, and "telegram" is writing at a distance, then "photograph" should be reserved solely as a verb and "photogram" should be used for "writing [sic] made by light." How little effect Ward's suggestion had can be measured by the fact that in 1921 the word "photogram" was coined afresh by L. Moholy-Nagy to describe his camera-less abstract photographs made by placing objects in contact with sensitive paper.

But if the word "photograph," with its derivatives, has now entered our language permanently and has proved satisfactory, a strange vocabulary has been brought forth by photographers – even when trade names, scientific terms and the vernacular of the motion picture world are not considered. The word "daguerreotype" was as baffling to the men of 1839 as the process itself. Daguerre used it in two ways: to refer to the apparatus, and to refer to the product. Even Frenchmen misspelled it, and Americans found it so confusing that Edgar Allen Poe pleaded in *Alexander's Weekly Messenger*, Jan. 15, 1840: "This word is properly spelt Daguerréotype, and pronounced as if written Dagairraioteep." But the *New York Observer* advised its readers to pronounce it "Dar-ger-row-type."

One who takes daguerreotypes was a "daguerreotypist," a "daguerreotyper," or a "daguerreian" (alternatively spelled "daguerrean" or "daguerrean"). Thackery went so far as to criticize a painting for its "daguerreotypical minuteness." Ruskin condemned "colored daguerreotypism."

Once the suffix "-type" had been established for photographic words, others were quick to follow. Talbot coined "calotype" (beautiful picture) to describe his latent-image process of 1841 and then, on Daguerre's precedent and, it is said, the urging of friends, changed it to "talbotype." The list of "-types" is imposing and an industrious researcher could easily turn up fifty or more.

Of the many, "ferrotype" alone has survived in common darkroom parlance, in a completely different meaning than its originator, Victor M. Griswold, could have imagined in 1856. Today "to ferrotype" means to dry a paper print in intimate contact with a highly polished metal plate to give it a glossy surface. Chromium-plated metal is used today, but it was not so long ago when "ferrotype tins" were iron sheets japanned black–identical to those sold for cutting into pieces for making tintypes or ferrotypes.

In 1838 Sir Charles Wheatstone invented a device to enable us to see pictures with the illusion of three dimensions. Originally, two pic-

*Herschel discovered the chemical now known as sodium thiosulphate in 1819. He named it "hyposulphite of soda."

tures were *drawn* in an approximation of the exact perspective projected by each eye. Wheatstone called his instrument "a Stereoscope, to indicate the property of representing solid figures." When photography was discovered, photographs were substituted for the drawings. The editor of the English magazine *Photographic News* in 1858 claimed to have introduced the word "stereogram" to designate them "instead of stereograph, as this latter word would more properly belong to an *instrument* whereby stereograms are taken. . . ." But in 1859 Oliver Wendell Holmes, apparently unaware of the British publication, wrote in the *Atlantic Monthly* of "double-eyed or twin pictures, or Stereographs if we may coin a word." Although the prefix "stereo" to define three-dimensional illusion obtained by viewing paired pictures was well established by 1871, a single-lens lantern-slide projector was given the name "stereoptican." Confusion still reigns between "3-D" stereoscopic pictures and (to borrow from Hollywood) the "flattie" stereoptican pictures.

A photographic positive on paper is, in English, a "print," though it is not printed at all; in French it is a "proof" (épreuve), even though it is intended to be permanent and not merely a hasty record of the promise of the negative; in German it is a "copy" (Kopie). None of these words indicate the photographic character of the product at all. Herschel suggested the words "negative" and "positive" for the "reversed copy" and "re-reversed copy" which Talbot used in his first description of his photogenic drawings, and we have made do with these words—even though we have to qualify a picture made without a negative as a "direct positive."

Herschel, too, proposed "snapshot" for an instantaneous photograph, using the gunman's term for shooting without taking deliberate aim.

Today—except for "postcard" and "wallet" we have no names for sizes of photographs. But only yesterday paper was sold cut to "carte-de-visite" (2¼ x 4 ins.), "cabinet" (4¼ x 6½ ins.), "imperial" (6½ x 9½ ins.) and other less popular sizes, including "victoria" (3¼ x 5 ins.)—named, in 1870, not for the then reigning Queen of England, but for Mrs. Victoria Woodhull, presidential candidate for the Woman's Rights party.

If we have found difficulty in finding words for technical processes and products, our search for words to describe the uses of photography and, in particular, to express philosophies about photography, has been even more unsuccessful. A photograph taken through a microscope is a "photomicrograph"; one taken with a conventional camera at a scale greater than life size is a "macrophotograph." But a "microphotograph" has nothing to do with microscopy at all; it is simply an extremely small photograph of a special kind, usually a copy of a document, letter, printed matter, photograph. If it is a "direct" photograph of nature, it is then a "miniature camera negative."

A miniature camera—according to the Royal Photographic Society—takes negatives smaller than 2¼ inches in either dimension. The size of the camera itself is not the criterion, and modern 35mm cameras are far from "miniature." Indeed, if the camera is really small and takes still pictures on film narrower than 35mm. it becomes a "sub-miniature camera."

In the field of esthetics our vocabulary is most impoverished. The simple phrase "art photograph" has been avoided by every great photographer, largely because it seems pompous to label one's product as "art." The substitute proposed by Henry Peach Robinson almost a hundred years ago, "pictorial photography" is a tautology, for how can a photograph be anything else than pictorial? From that unhappy phrase came the word "pictorialism"—which now is passing into oblivion. To describe the use of photography to interpret as well as record the sociological scene, the phrase "documentary photography" came into usage—yet to one not aware of the premise on which it is based, the phrase is meaningless, for every photograph is a document, if only of the vision of its maker. The doctrine of using photography in the most direct and functional manner for esthetic effect has yet to be summed up in a phrase. We struggle with the unsatisfactory "pure photography" (practiced by "purists") or "straight photography." In a desperate attempt to define the work of the dedicated artist who has chosen to use the camera we have to resort to the near-tautology "creative photography."

The truth is that photography is so individual a medium that borrowed words will not define its special and multitudinous aspects. Only by context can we hope to achieve the definitions which we need. It is heartening to see a new literature of photography in the making. Though a picture may be worth ten thousand words, we cannot do without words if we strive to bring photography to the maturity which it so brilliantly holds in promise.

PORTRAIT OF A LADY. Daguerreotype, 8.5 x 6.7 cm. At foot of mat: "Derussy, rue des Prouvaires, 3". On back of frame, broadside of Derussy, claiming that in the last three years he has taken 12,000 portraits, by a process of his own invention which enables him to charge low prices ("6, 8, 10, francs and up, in the shade, and in several seconds"). About 1850. Cromer coll. (Neg. 3164)

ELDERLY LADY SEATED BY FIREPLACE. Daguerreotype, 7.2 x 5.8 cm. Maker not known, probably an amateur. About 1850, Daguerreotypes were rarely taken inside homes, this is an unusually fine example. Cromer coll. (Neg. R 48176 E)

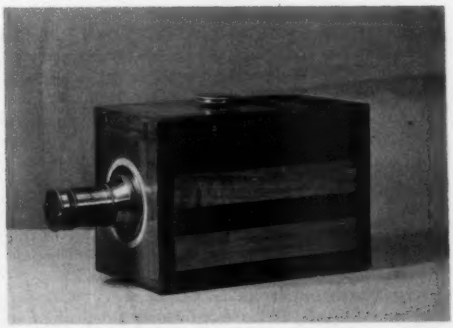
RETURN OF TROUPS FROM ITALY, 1858. Daguerreotype, 6.6 x 5.9 cm. Maker not known. 1858. Daguerreotypes of outdoor scenes with people are extremely rare. Cromer coll. (Neg. 185)

ELDERLY MAN IN TOP HAT. Daguerreotype, 5.9 x 4.8 cm. On back of frame, label of Alphonse Bernoud, of Paris. About 1850. Cromer coll. (Neg. 3173)

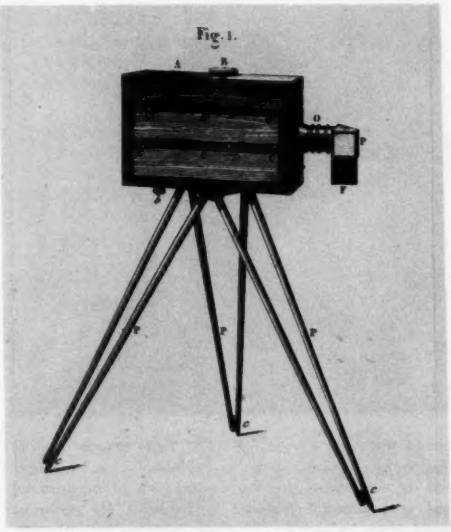
DAGUERREOTYPE CAMERAS AND EQUIPMENT

*The basic camera and apparatus described by Daguerre in his instruction manual, was built by several manufacturers. N. P. Lerebours, for example, offered in his 1841 catalogue "Normal apparatus of M. Daguerre," at 300 francs. Improvements were made in this design. The first step was to offer cameras for plates smaller than the one adopted by Daguerre. By cutting his "whole plates" (16 x 22 cm.) there was obtained the "half plate" (12.2 x 16 cm.); the "quarter plate" (8 x 10.8 cm.); the "sixth plate" (8 x 7 cm.). *The second step was to design the accessory apparatus so that it could be conveniently carried about in a relatively small box. The design of lenses kept pace with that of cameras, and a notable advance was made when Josef Petzval designed, and P. F. Voigtländer built, a lens with the aperture of f/3.6 in 1840. The George Eastman House owns a number of these early cameras and lenses.*

**These dimensions appear in the catalogue of the Paris dealer in daguerreotype supplies, Amédée Queslin, printed as an appendix to his book Le Daguerréotype rendu facile (Paris, 1843). It will be noted that the dimensions only approximate the fractions of a whole plate, in order to provide more pleasing proportions. In England and America the metric sizes were rounded off into inches as follows: whole plate, 6½ x 8½; half plate, 5½ x 4¼; quarter plate, 3¼ x 4¼; sixth plate, 2¼ x 2¾.*



CAMERA, FRENCH, for whole plates (20 x 16 cm.). Made in Paris by Charles Chevalier, 1840. Outer box (L. 42.3 cm.; W. 23.2 cm.; H. 28.4 cm.) hinged along both sides, collapsible when lens-board and ground glass are removed to form compact unit. Inner box slides for focusing, and can be fixed in position by tightening brass knob on top. Knob marked "Photographe / à Verres Combinés / Inventé par Charles Chevalier / Ingénieur Opticien, Brévété. / Palais Royal 163 / Paris." Doublet lens; focal length 29 cm.; equivalent effective aperture, f/5.6. Cromer coll. (Neg. RL 40769)



The camera is described and illustrated in Charles Chevalier, Nouvelles instructions sur l'usage du Daguerréotype. Description d'un nouveau Photographe, *Paris, Chez l'Auter, 1841.* (See illus. above.) *The word "photographe" is used to describe the apparatus. The camera was furnished as part of a kit containing all necessary apparatus. Although designed for the daguerreotype process, the camera was also used to take calotypes. For a description and diagram of the lens, see Rudolf Kingslake, "First Daguerreotype Lenses,"* Image, II (1953), 29-30.

GIFT OF PHOTOGRAPHS

Recently a gift of fourteen photographs in black and white and two in color of the work of Arnold Newman were given to George Eastman House. Mr. Harold Kaye made it possible for the photographer to print a few sets of his finest pictures and also made them available to the museum.

David Hare by Arnold Newman, 1952. One of several photographs recently given to Eastman House. Mr. Newman is well known for the employment of background and environmental material to augment his portraits. David Hare, a sculptor, is shown with an exceptionally stark environment which expresses something of the character of the sculptor and his work.

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GEORGE EASTMAN HOUSE ASSOCIATES CALENDAR

Exhibitions in the Dryden Gallery

December 14-January 14, 1957

PHOTOGRAPHS BY WYNN BULLOCK
Lyrical and romantic photographs by one of the better known West Coast photographers.

100 PHOTOGRAPHS BY EDWARD WESTON
The first showing of a traveling exhibition organized for the Smithsonian Institution.

Exhibitions in the Study Room

December

Van Deren Coke of Lexington, Kentucky

January, 1957

Jerome Liebling of Minneapolis, Minnesota

Travelogues

December 3

TRAVELS OF A MAGAZINE PHOTOGRAPHER
by Miss Margaret Bourke-White of LIFE

January 7

EAST OF THE ANDES by Stephen Thomas, Director Rochester Museum of Arts & Sciences.

Seminar Program — Dryden Theatre Motion Pictures

December 14

POILE DE CAROTTE – with Harry Baur, in French, English titles.

THE DRYDEN THEATER OF THE GEORGE EASTMAN HOUSE